

THAT WHICH IS CLAIMED:

1. An isolated nucleic acid molecule that encodes a polypeptide having an amino peptidase protein activity, selected from the group consisting of:

a) a nucleic acid molecule comprising a nucleotide sequence which is at least 70% identical to the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;

b) a nucleic acid molecule comprising a nucleotide sequence which is at least 80% identical to the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;

c) a nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;

d) a nucleic acid molecule that hybridizes to a nucleic acid molecule comprising SEQ ID NO:2, SEQ ID NO:3, or a complement thereof, under stringent conditions, said stringent conditions comprising hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2 X SSC, 0.1% SDS at 50-65°C.

2. The nucleic acid molecule of claim 1 further comprising vector nucleic acid sequences.

3. The nucleic acid molecule of claim 1 further comprising nucleic acid sequences encoding a heterologous polypeptide.

4. A host cell which contains the nucleic acid molecule of claim 2.

5. The host cell of claim 4 which is a mammalian host cell.
6. A non-human mammalian host cell containing the nucleic acid molecule of claim 1.
7. An isolated polypeptide having an amino peptidase protein activity, selected from the group consisting of:
- a) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 70% identical to a nucleic acid comprising the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;
 - b) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 80% identical to the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;
 - c) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:2, SEQ ID NO:3, or the nucleotide sequence of the DNA insert of the plasmid deposited with ATCC as Accession Number PTA-1642;
 - d) a polypeptide encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:2, SEQ ID NO:3, or a complement thereof under stringent conditions, said stringent conditions comprising hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2 X SSC, 0.1% SDS at 50-65°C; and
 - e) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:1, or the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC as Accession Number PTA-1642, wherein the fragment comprises at least 50 contiguous amino acids of SEQ ID NO:2.

8. The isolated polypeptide of claim 7 comprising the amino acid sequence of SEQ ID NO:1.
9. The polypeptide of claim 7 further comprising heterologous amino acid sequences.
10. An antibody which selectively binds to a polypeptide of claim 7.
11. A method for producing a polypeptide comprising culturing the host cell of claim 4 under conditions in which the nucleic acid molecule is expressed.
12. A method for detecting the presence of a polypeptide of claim 7 in a sample, comprising:
- a) contacting the sample with a compound which selectively binds to a polypeptide of claim 7; and
 - b) determining whether the compound binds to the polypeptide in the sample.
13. A method for detecting the presence of a polypeptide of claim 8 in a sample, comprising:
- a) contacting the sample with a compound which selectively binds to a polypeptide of claim 8; and
 - b) determining whether the compound binds to the polypeptide in the sample.
14. The method of claim 13, wherein the compound which binds to the polypeptide is an antibody.
15. A kit comprising a compound which selectively binds to a polypeptide of claim 8 and instructions for use.

16. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample, comprising the steps of:

- a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample.

17. The method of claim 16, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

18. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

19. A method for identifying a compound which binds to a polypeptide of claim 8 comprising the steps of:

- a) contacting a polypeptide, or a cell expressing a polypeptide of claim 8 with a test compound; and
- b) determining whether the polypeptide binds to the test compound.

20. The method of claim 19, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

- a) detection of binding by direct detecting of test compound/polypeptide binding;
- b) detection of binding using a competition binding assay;
- c) detection of binding using an assay for aminopeptidase protein activity.

21. A method for modulating the activity of a polypeptide of claim 8 comprising contacting a polypeptide or a cell expressing a polypeptide of claim 8 with a

compound which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

22. A method for identifying a compound which modulates the activity of a polypeptide of claim 8, comprising:

- a) contacting a polypeptide of claim 8 with a test compound; and
- b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

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